

ABSTRACT

A method for stopping replay tornadoes in a processor. The method of one embodiment comprises scheduling an instruction for execution speculatively. A determination is made whether the instruction executed correctly. The instruction is routed to a replay mechanism if the instruction did not execute correctly. A determination is made whether a replay tornado exists. The instruction is routed for re-execution if the instruction executed incorrectly and no replay tornado exists. Breaking the replay tornado if the replay tornado exists. Replay safe instructions in the pipeline are retired. Non-replay safe instructions in the pipeline are marked for re-execution. The non-replay safe instructions are rescheduled for re-execution.